



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

14.7

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,769	10/30/2003	Elena Grassi	Q78055	6931

23373 7590 02/15/2007
SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

LAVARIAS, ARNEL C

ART UNIT	PAPER NUMBER
----------	--------------

2872

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/15/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/695,769

Applicant(s)

GRASSI ET AL.

Examiner

Arnel C. Lavarias

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendments to Claims 1, 5 in the submission dated 12/15/06 are acknowledged and accepted.
2. The addition of Claims 15-20 in the submission dated 12/15/06 is acknowledged and accepted.

Response to Arguments

3. The Applicants' arguments filed 12/15/06 have been fully considered but they are not persuasive.
4. The Applicants again argue that, with respect to Claims 1 and 6, as well as Claims 2-5, 7-12 which depend on Claims 1 and 6, Kadrmas fails to teach or reasonably suggest the transmitting beam axis incident to the primary optical surface not coinciding with the receiving beam axis incident to the primary optical surface. The Examiner again respectfully disagrees, and again refers Applicants to Examiner's responses in Section 4 of the Office Action dated 6/15/06 and Section 6 of the Office Action dated 10/11/05.
5. The Applicants further argue that, with respect to Claims 1 and 6, as well as Claims 2-5, 7-12 which depend on Claims 1 and 6, Kadrmas fails to teach or reasonably suggest the reflecting optical surface of the primary optical surface being larger than the at least one illuminated area. The Examiner respectfully disagrees. As previously set forth in Section 8 of the Office Action dated 6/15/06, Kadrmas discloses the reflecting optical

Art Unit: 2872

surface of the primary optical surface (See specifically both surfaces 48 and 52 in Figure 1 of Kadrmas) being explicitly larger than the area illuminated by the transmitting beam (See specifically only surface 48 illuminated by transmitting beam 142 in Figure 1 of Kadrmas).

6. Finally, the Applicants argue that, with respect to Claims 1 and 6, as well as Claims 2, 7, 11-14 which depend on Claims 1 and 6, Gould et al. fails to teach or reasonably suggest the reflecting optical surface of the primary optical surface being larger than the at least one illuminated area. The Examiner respectfully disagrees. Gould et al. specifically discloses the reflecting optical surface of the primary optical surface (See specifically surface 26 in Figure 1 of Gould et al.) being larger than the area illuminated by the transmitting beam (See specifically upper portion of surface 26 in Figure 1 of Gould et al., wherein the transmitting or output beam is only 6.4 cm in diameter when it strikes surface 26, which itself is 25 cm in diameter; See specifically col. 10, line 41-col. 11, line 44).
7. Claims 1-20 are now rejected as follows.

Claim Objections

8. Claim 13 is objected to because of the following informalities:
- Claim 13 recites the limitation "said optical face" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim. For purposes of examination, this limitation has been taken to mean 'the primary optical surface'.
- Appropriate correction is required.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-3, 5-8, 10-12, 15-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kadrmas (U.S. Patent No. 3781552), of record.

Kadrmas discloses a bi-directional telescope for a laser on air telecommunication system and method for receiving-transmitting an optical signal through a bi-directional telescope for a laser on air telecommunication system (See for example Figures 1-2), both the telescope and method comprising (providing) a primary optical surface (See for example 50 in Figure 1), comprising at least one illuminated area (See for example 46, 48 in Figure 1) and a reflecting optical surface (See for example 48, 52 in Figure 1); (providing) at least one transmitting device (See for example 22 in Figure 1) forming at least one transmitting beam impinging against the primary optical surface at the at least one illuminated area (See for example 46, 48 in Figure 1), the at least one transmitting beam having a corresponding axis (in this case, an axis of propagation); (providing) a receiving device (See for example 72 in Figure 1) collecting the power deflected by the reflecting optical surface (See for example 52 in Figure 1) of the primary optical surface into a receiving beam, the receiving beam having an axis (in this case, an axis of propagation); wherein the reflecting optical surface of the primary optical surface is

larger than the at least one illuminated area (See 50, 48 in Figure 1) and the transmitting beam axis incident to the primary optical surface does not coincide with the receiving beam axis incident to the primary optical surface (It is noted that certain axes of both the receivers 72 and the source laser 22 are not coincident; also see Section 6 of the Office Action dated 10/11/05). Kadrmas further discloses the telescope further comprising (providing) a secondary optical surface (See for example 56 in Figure 1), wherein the received power deflected by the reflecting optical surface of the primary optical surface is focused (See for example 25 in Figure 1) by the secondary optical surface into the receiving beam; the primary optical surface comprising a hole (See for example hole in 50 of Figure 1); the secondary optical surface comprising a hole (See hole in 56 of Figure 1); the at least one transmitting device being placed fundamentally behind the reflecting optical surface (See 22, 50 in Figure 1, where 'behind' has been taken to be the locations where the reflective optical surface of element 50 does not face) and wherein the telescope further comprises means for deflecting the transmitting beam towards a secondary optical surface (See for example 38 in Figure 1); the at least one illuminated area overlaps the reflecting optical surface (See 48, 52 in Figure 1, wherein the reflecting optical surface 48, 52 includes/overlaps that area of the surface 48 used for illumination by the source); the receiving device being disposed fundamentally behind the primary optical surface (See 72, 50 in Figure 1, where 'behind' has been taken to be the locations where the reflective optical surface of element 50 does not face); the receiving beam passes through a hole in the primary optical surface (See hole in surface 52 of Figure 1); and a center of the illuminated area is shifted from a center of the primary optical surface

(See 48, 52 in Figure 1, wherein a center of the illuminated area is located in 48, while a center of the primary optical surface is located in the hole in surface 52).

11. Claims 1-2, 6-7, 11-14, 19-20, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Gould et al. (U.S. Patent No. 4777660), of record.

Gould et al. discloses a bi-directional telescope for a laser on air telecommunication system and method for receiving-transmitting an optical signal through a bi-directional telescope for a laser on air telecommunication system (See for example Figure 1), both the telescope and method comprising (providing) a primary optical surface (See for example 26 in Figure 1), comprising at least one illuminated area (See incident laser beam that strikes surface 26 via elements 14, 16, 18, 19, 20, 22, and 24 in Figure 1) and a reflecting optical surface (See 26 in Figure 1); (providing) at least one transmitting device (See for example 12 in Figure 1) forming at least one transmitting beam impinging against the primary optical surface at the at least one illuminated area, the at least one transmitting beam having a corresponding axis (in this case, the optical axis or center line of the beam); (providing) a receiving device (See for example 28 in Figure 1) collecting the power deflected by the reflecting optical surface (See for example incident light that strikes 28 via elements 25, 26, 24, and 22 in Figure 1) of the primary optical surface into a receiving beam, the receiving beam having an axis (in this case, the optical axis or center line of the beam); wherein the reflecting optical surface of the primary optical surface is larger than the at least one illuminated area (See 26 in Figure 1; col. 10, line 41-col. 11, line 63) and the transmitting beam axis incident to the primary optical surface does not coincide with the receiving beam axis incident to the primary optical surface (It

Art Unit: 2872

is noted that the optical axes or center lines of both the transmitting beam and the receiving beam are not coincident, See Figure 1). Gould et al. further discloses the telescope further comprising (providing) a secondary optical surface (See for example 24 in Figure 1), wherein the received power deflected by the reflecting optical surface of the primary optical surface is focused by the secondary optical surface into the receiving beam; the at least one illuminated area overlaps the reflecting optical surface (See 26 in Figure 1); the axis of the transmitting beam is located at the center of the transmission beam impinging on the primary optical surface, and the axis of the receiving beam is located at the center of the receiving beam deflected from the reflecting optical surface (See incident transmitting and receiving beams on element 26 in Figure 1); and a center of the illuminated area is shifted from a center of the primary optical surface (See 26 in Figure 1, wherein a center of the illuminated area is located in the upper portion of surface 26, while a center of the primary optical surface is located in the center of surface 26 along its optical axis).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 4, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kadrmas in view of Weiss (U.S. Patent No. 3371212), of record.

Kadrmass discloses the invention as set forth above in Claims 1-2, 6-7, except for the at least one transmitting device being placed fundamentally in front of the reflecting optical surface. However, it is well known in the art for such transmitting telescopic optical systems to place the transmitter or source either behind or in front of the reflecting face of the main reflector of the telescopic optical system. For example, Weiss teaches a conventional transmitting and receiving telescopic optical system (See Figure), wherein the transmitting optical source (See 50 in Figure) is placed in front of (i.e. in locations where the reflecting surface of the primary mirror face) the reflecting surface of the main reflector (See 12 in Figure) of the telescope. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the at least one transmitting device be placed fundamentally in front of the reflecting optical surface, as taught by Weiss, in the telescope and method of Kadrmass, for reducing the physical size of the telescope optical system, while making the source readily accessible for replacement if the source is damaged or requires replacement.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnel C. Lavarias whose telephone number is 571-272-2315. The examiner can normally be reached on M-F 9:30 AM - 6 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on 571-272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2872

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Arnel C. Lavarias
Primary Examiner
Group Art Unit 2872
2/9/07


ARNEL LAVARIAS
PRIMARY PATENT EXAMINER